

Replacement page

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1079.

In addition, data can be transferred out of the processor element, and indeed out of the processor block in which the element is situated, by way of a block I/O data out bus 1067d, and can be transferred into the processor block by way of a block I/O data in bus 1067c. Address transaction ID and data transaction ID information can be transferred to the processor block by way of busses 1067a and 1067b. The MEE feedback data is transferred from the PE memory unit 1061c or the PE register file 1061b to the MEE feedback buffer (not shown) by way of a MEE feedback data out bus 1064.

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Figure 13 shows the block I/O interface in more detail. PE memory read and write data buses 1078 and 1079 interface with a block I/O register file 1071 for transferring data between the register and the processing unit and the memory unit. Data to be read out from the processing element is output from the block I/O register file 1071 onto the block I/O data out bus 1067c, and data to be read into the processing element concerned is input to the block I/O register file 1071 from the block I/O in bus 1062d.

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The processing elements that require access to memory indicate that this is the case by setting an indication flag 1076 or mark bit. The first such marked PE is then selected, and the memory address to which it requires access is transmitted to all of the processing elements of the processing block. The address is transmitted

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